What is claimed is:

1. An inverter controller for driving a motor comprising:

a rectifier connected to an AC power source, said rectifier including

a diode bridge; and

a reactor which has a predetermined inductance, said reactor being connected to an input or an output side of said diode bridge;

an inverter which converts a DC power received from said rectifier into an AC power to supply the AC power to the motor;

a capacitor which has a predetermined capacitance, said capacitor being connected between DC buses of said inverter;

a generator which generates a voltage command value for each phase of the motor on the basis of a motor speed command value received from outside of said inverter controller;

a detector which detects a DC voltage between the DC buses of said inverter;

a first corrector which calculates a voltage correction coefficient by comparing the DC voltage received from said detector with a predetermined DC reference voltage;

a second corrector which corrects the voltage command value for each phase of the motor by multiplying the voltage command value and the voltage correction coefficient;

a selector which selects either two-phase modulation or three-phase modulation as a modulation type used in pulse width

modulation control of said inverter;

a computer that computes a carrier frequency used in the pulse width modulation control of said inverter; and

a pulse width modulation controller that controls a pulse width modulation so that a value of a voltage to be applied to the motor equals to the voltage command value corrected by said second corrector, by using the modulation type selected by said selector and the carrier frequency computed by said computer.

2. The inverter controller for driving a motor according to claim 1, further comprising an overvoltage protector connected in parallel to said capacitor.

3. The inverter controller for driving a motor according to claim 2, wherein said selector switches between the two-phase modulation and the three-phase modulation on the basis of the motor speed command value received from outside of said inverter controller.

4. The inverter controller for driving a motor according to claim 2, wherein said computer changes the carrier frequency on the basis of the motor speed command value received from outside of said inverter controller.

5. The inverter controller for driving a motor according

to claim 3, wherein said computer changes the carrier frequency on the basis of the motor speed command value received from outside of said inverter controller.

6. The inverter controller for driving a motor according to claim 2, wherein said selector switches between the two-phase modulation and the three-phase modulation on the basis of the DC voltage received from said detector.

7. The inverter controller for driving a motor according to claim 2, wherein said computer changes the carrier frequency on the basis of the DC voltage received from said detector.

8. The inverter controller for driving a motor according to claim 6, wherein said computer changes the carrier frequency on the basis of the DC voltage received from said detector.

9. The inverter controller for driving a motor according to claim 1, wherein an operating frequency of said inverter is prevented from being stationary fixed at a resonance frequency, which is an even number multiple of an AC power source frequency, and within a range of predetermined frequency region around the resonance frequency.

10. The inverter controller for driving a motor according

to claim 1, wherein a combination of an inductance value of said reactor and a capacitance value of said capacitor is determined so that a resonance frequency determined by the inductance value and the capacitance value is larger than 40 times an AC power source frequency.

11. An air conditioner including the inverter controller for driving a motor comprising:

a rectifier connected to an AC power source, said rectifier including

a diode bridge; and

a reactor which has a predetermined inductance, said reactor being connected to an input or an output side of said diode bridge;

an inverter which converts a DC power received from said rectifier into an AC power to supply the AC power to the motor;

a capacitor which has a predetermined capacitance, said capacitor being connected between DC buses of said inverter;

a generator which generates a voltage command value for each phase of the motor on the basis of a motor speed command value received from outside of said inverter controller;

a detector which detects a DC voltage between the DC buses of said inverter;

a first corrector which calculates a voltage correction coefficient by comparing the DC voltage received from said

detector with a predetermined DC reference voltage;

a second corrector which corrects the voltage command value for each phase of the motor by multiplying the voltage command value and the voltage correction coefficient;

a selector which selects either two-phase modulation or three-phase modulation as a modulation type used in pulse width modulation control of said inverter;

a computer that computes a carrier frequency used in the pulse width modulation control of said inverter; and

a pulse width modulation controller which controls a pulse width modulation so that a value of a voltage to be applied to the motor equals to the voltage command value corrected by said second corrector, by using the modulation type selected by said selector and the carrier frequency computed by said computer.